ACQUISITIONS OF U.S. COMPANIES BY FOREIGN FIRMS

By

DEBORAH LYNNE WRIGHT

A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

1987

Copyright 1987

by

Deborah Lynne Wright

ACKNOWLEDGMENTS

Although this dissertation represents my own work, it could not have been accomplished without the support and guidance of other people. Dr. Roy Crum and Dr. Haim Levy both deserve special thanks for all their efforts. The other members of my committee are also to be thanked for their contributions. My parents provided me with the support necessary to complete the past four years and I could not have done this without them. Finally, there are not sufficient words to thank my husband, Brian, who has been so patient during the final stages, which never seemed to end.

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS iii

ABSTRACT v

CHAPTERS

I INTRODUCTION 1

II LITERATURE REVIEW. 6

International Motives for Acquisitions . 6
General Motives for Mergers. 9

III REGULATORY ISSUES. 18

Legal Issues 18
Tax Issues 23
Notes. 26

IV RESEARCH DESIGN. 27

Data 27
Hypotheses 44

V EMPIRICAL RESULTS. 58

Principal Components . . . . 58 → macro
Logistic Regression. . . . . 65 → firm

VI SUMMARY. 87

Conclusions. 87
Further Research 92

APPENDICES

A OTHER FOREIGN COUNTRIES MAKING ACQUISITIONS IN THE UNITED STATES. 94

B SIC INDUSTRY CLASSIFICATION CODES. . . . 95

BIBLIOGRAPHY 97

BIOGRAPHICAL SKETCH. 101

Abstract of Dissertation Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
Requirements for the Degree of Doctor of Philosophy

ACQUISITIONS OF U.S. COMPANIES BY FOREIGN FIRMS

By

Deborah Lynne Wright

December 1987

Chairman: Dr. Roy L. Crum
Major Department: Finance, Insurance, and Real Estate

The number of foreign acquirers of U.S. companies has been increasing during the 1980s. These transnational direct investments impact the U.S. economy and indicate that some structural changes may have occurred in the global economic environment that have enhanced the appeal of purchasing U.S. firms.

This dissertation attempts to identify, through the use of principal components analysis, which macroeconomic variables offer more information for determining whether or not foreign acquisitions will be undertaken in the United States. It also examines the firm-specific characteristics of the acquiring foreign firms through the use of logistic regression to determine if general financial characteristics exist for a foreign acquiring firm.

The results indicate that certain macroeconomic variables play a greater role than others in providing information as to which country a foreign acquirer may originate from.

General financial characterisitics of foreign acquiring firms were identified, which remained fairly consistent, regardless of the time period during which the acquisition occurred, the country of origin of the acquirer, and the amount of interest purchased of the acquired U.S. firm. The logistic regressions obtained are also able to predict what types of foreign firms have a higher probability of making U.S. acquisitions in the future.

These findings imply that is is possible to identify foreign firms using financial characteristics and macro-economic variables to determine whether individual foreign firms from specific countries have a high probability of acquiring a U.S. company. The findings also enable us to examine which industries are more closely targeted and under what economic conditions, which has implications for policies regarding foreign direct investment.

CHAPTER I
INTRODUCTION

The number of foreign companies acquiring United States' corporations has risen dramatically since the 1970s. Fewer than 90 such acquisitions were completed each year during that decade. With the exception of 1983, the 1980s has seen an unmitigated increase in the number of acquisitions by foreigners (averaging over 150 each year), along with a corresponding increase in the dollar value of acquisitions. These transnational direct investments impact the U.S. economy both directly and indirectly and indicate that some structural changes may have occurred in the global economic environment that have enhanced the appeal of purchasing U.S. firms.

As can be seen from Table 1, the volume and dollar size of the foreign acquisitions are considerably smaller than for the domestic acquisition market. The foreign acquisition market in the United States, however, exhibits greater volatility in both the volume and the value from year to year. This suggests that different factors motivate the foreign acquisition market in the United States in contrast to those factors motivating the domestic acquisition market.

There are two primary sources from which the differences in motviating factors can originate. The first source being macroeconomic in nature and the other, microeconomic or firm-specific. If the individual factors within each of these two categories can be isolated, then it should be possible to predict under what circumstances foreign acquisitions in the United States will occur.

TABLE 1

Acquisitions by Domestic and Foreign Firms in Aggregate
(excluding financial and real estate acquisitions)

	Year					
	1981	1982	1983	1984	1985	1986
Domestic						
Number of Deals	1579	1443	1639	2052	2193	2837
% Change from Previous Year		- 8.6	+13.6	+25.2	+ 6.9	+25.4
Dollar Value (Millions US$)	47868	45091	34118	94817	99847	142095
% Change from Previous Year		- 5.8	-24.3	+177.9	+ 5.3	+42.3
Foreign						
Number of Deals	219	172	85	156	189	270
% Change from Previous Year		-21.5	-48.6	+83.5	+21.2	+42.9
Dollar Value (Millions US$)	14679	3980	1576	6503	17422	19802
% Change from Previous Year		-72.9	-60.4	+312.7	+167.9	+13.7

Compiled from Mergers and Acquisitions.

It is first necessary to examine the macroeconomic environment during which the majority of foreign acquisitions have taken place. Have there been any macroeconomic changes which would make U.S. firms more appealing to foreign investors? These changes could have occurred either in the United States or the home country of the foreign acquirer.

If the global macroeconomic environment is such that it favors investment in the United States, it raises the question of why are foreign firms chosing direct investment over merely purchasing shares of individual U.S. corporations? The latter can be undertaken with much lower transaction costs and is easier to sell on the secondary market should the need arise. The most probable conclusion, from a financial standpoint, would be that foreign firms must have some specific characteristics that provide them with advantages that the U.S. firms do not possess, and that these characteristics allow them to gain synergies that could not be obtained otherwise. Thus it is also necessary to examine the firm-specific characteristics of the buying firms. From the combination of information gleaned from the macro- and microeconomic analyses, we can then form predictions regarding the type of foreign firm that is likely to acquire a U.S. company under certain conditions.

We seek first to identify the principal macroeconomic factors that are contributing to this phenomenon and to determine which of these are contain the most information. This will enable us to reduce the set of relevant variables. After this has been established we provide a microeconomic or firm-specific profile of those foreign firms that make direct investments in the United States. From this profile, specific characteristics can be identified so that one would be able to identify the type of foreign firm that might make direct investments in the future, given that the macroeconomic situation is also conducive to such activity.

The first section examines macroeconomic and other factors that have theoretical validity which suggest direct investment may take place. Using these variables, a principal components analysis will be conducted in order to determine which of the variables contain relatively more information that would explain what might motivate direct foreign investment in the United States. The results of this analysis will enable one to identify under what environmental or economic circumstances firms from a particular country may be interested in examining the possiblity of acquiring U.S. firms.

Having determined what type of economic environment is conducive to direct foreign investment in the United States, it is then of interest to examine the firms themselves and what type of characteristics they possess. Employing logistic regression, it is possible to formulate a model that has both explanatory and predictive powers for classifying foreign firms as to whether or not they have a high probability of making acquisitions in the United

States. The variables considered in this case are firm-specific.

This dissertation attempts to answer two major questions:

(1) What macroeconomic variables possess the most information for determining whether a direct foreign investment will be undertaken in the United States?

(2) What firm-specific characteristics can be identified that will enable us to identify those foreign firms with a high propensity to make acquisitions in the United States?

CHAPTER II
LITERATURE REVIEW

International Motives for Acquisitions

In general, mergers provide an opportunity for growth by firms and, on a broader scale, they play the role of reallocating resources within the economy. Mergers have been examined extensively in the financial literature in an attempt to explain why they occur, particularly given the findings that on a domestic basis, acquiring firms tend not to gain from such activities. On the other hand, acquired firms have been observed to show abnormal returns as a result of mergers (Mandelker 1974).

If these findings hold on an international basis, it would suggest that there may be a transfer of wealth from the acquiring firm to the United States as a result of the merger. A study by Wansley, Lane and Lee (1983) infers that foreign acquiring firms do not earn statistically significant abnormal returns from acquiring U.S. firms. This would suggest that U.S. acquisitions are not beneficial to the foreign acquiring firms; hence we should not observe the activity in this market that is currently occurring. However if we examine this behavior in the light of portfolio theory, we can better understand why foreign firms may still choose U.S. companies as targets for takeovers.

It has been shown (Lessard 1976) that investors from the United States have less to gain from a diversification standpoint, by investing in the rest of the world, as the world market portfolio is composed primarily of U.S. securities. By 1980 U.S. equities comprised more than half of the world equity market; by contrast less than half of the world bond market consisted of U.S. bonds (Levy and Sarnat 1984). Thus although U.S. securities in total may not represent a greater proportion of the world market portfolio, the equity side, in which we are interested, is still dominated by United States securities. Therefore, investors from other countries should still be able to benefit from investment in U.S. securities as their markets have a less than perfect correlation with the world market portfolio. Levy and Sarnat (1970) argue that under complete capital markets, combining two less than perfectly correlated assets will not provide further benefits than those available before their combination. The U.S. capital markets are considered to be complete and efficient, and as such, firms are not able to make above-normal returns simply by investing in the capital markets directly in the form of securities.

The market for corporate acquisitions is not considered to be as efficient as the securities markets. In the context of the two country environment, it also is less than complete. Senbet and Taggart (1984) show that when markets are incomplete, i.e. when not every possible payoff can be constructed from combinations of existing assets, which may be due to missing markets, transactions costs, agency costs, etc., combining two less than perfectly correlated assets may provide new opportunities. Thus even though the foreign acquirer may not make any abnormal gains from the acquisition itself, opportunities may be created for further gain in the future. Ragazzi (1973) concludes that direct investments take place when there are imperfections in the market enabling firms to earn higher rates of return than they would be able to acheive normally. He notes that securities markets are theoretically efficient and therefore are a more expedient way of transferring capital internationally. This implies that capital would always be moved via the securities market unless inefficiencies in other markets allow firms to obtain a higher rate of return such as through direct investment.

A study by Jacquillat and Solnik (1978) shows that the benefits obtainable from multinational diversification come only through investment in the various foreign markets directly. They show that investors are unable to duplicate the benefits of international diversification by investing in a multinational corporation. This supports Ragazzi's contention that there are imperfections in the factor markets that do not exist in the securities markets.

Kindleberger (1969) observes that when engaging in direct investments, the firms involved may each enjoy a comparative advantage in some factor that can be exploited in a foreign country through direct investment that cannot be achieved in the home country. The acquisitions market therefore provides an opportunity for foreign firms to take advantage of imperfections in a factor market through direct investment.

General Motives for Mergers

The primary motives for domestic mergers include (Brealey and Myers 1984): (1) economies of scale resulting from centralization of common services as well as economies realized in capital costs; (2) combining complementary resources, thereby allowing a company to acquire and adapt missing resouces to company needs instead of developing them; (3) use for surplus funds--a firm may be able to gain a higher return by acquiring another company rather than by investing in marketable securities or some other internal investment; (4) eliminating inefficiencies so that earnings are increased through better management; (5) tax considerations; (6) market power, which permits a firm to increase its size relative to others in the industry; and (7) strategic realignment to a changing environment.

The form which the merger or acquisition may take can be placed into three general categories (Copeland and Weston 1983): (1) product extension, whereby the firm broadens its existing product lines through merger; (2) geographic market extension, which would encompass transnational mergers when the two firms involved originally operated in non-overlapping geographic areas; and (3) pure conglomerate merger, where the two firms originally conducted business in unrelated areas. All of the acquisitions by foreign firms by their very nature involve geographic extension, unless the acquirer already has operations in the United States and is merely expanding them. Thus we might anticipate that product extension and pure conglomerate mergers will be more prevalent among those firms that already have operations in the United States.

Solnik (1974) examined the benefits of diversifying across countries versus across industries on an international basis and found that country diversification provided a greater reduction in variability, but that a combination of the two was superior. Hinsey and Caves (1985) suggest that a firm will choose either product or geographic extensions when merging. Thus we would expect to see more firms merging with firms in similar industries if the acquisition is the firm's first foray overseas. If the firm is already operating in the United States, then more unrelated mergers would be expected.

Whatever form the merger may take, there are some unique factors that may motivate an international firm to acquire a U.S. company: national laws governing foreign investment, trade and tariff barriers, cultural differences and exchange rates. These factors can influence whether a firm will choose to undertake a foreign acquisition.

Exchange Rate Fluctuations. Lewellen (1971) showed that a potential source of gain in a conglomerate merger may arise when an undervalued company is acquired above its current value but below its intrinsic value. Extending this logic to the international arena, a different circumstance may exist whereby a firm would not be priced in equilibrium from an international perspective and hence afford an opportunity for gain to a purchasing foreign firm, but not to a domestic purchasing firm. If exchange rates are temporarily out of equilibrium, it may be the case that even though the U.S. target firm is priced fairly in the U.S. market, a foreign acquirer may be able to take advantage of the temporary deviation from purchasing power parity to create a situation for gain where none exists for an acquiring U.S. firm.

Another argument relating to changes in the exchange rate as a motive for foreign acquisition has been proposed by Lessard (1986). He suggests that firms change the locus of production to take advantage of relative price shifts. This strategy requires flexibility on the part of the company in being able to gear up operations in order to take advantage of the relative price shift before there is another shift in relative prices. It has been observed (Lee, 1985) that a high correlation exists between merger activity and plant and equipment expenditures. Thus it may be the case that in the situation where a firm wishes to expand its operations in the United States, if a temporary disequilibrium exists in purchasing power parity, then that firm may be able to expand its operations faster and lock-in lower costs if it purchases another firm that meets its requirements. This allows the company to expand operating capacity while simultaneously giving it the opportunity to create synergistic benefits from the acquisition. In the long-run, if other synergies also exist and the organizations mesh well, then the acquiring firm should realize an increase in value. This can be formulated as follows: the gain due to temporary PPP disequilibrium + long-run synergies = additional value to the acquiring firm from the acquisition.

Ragazzi (1973) proposes an argument similar to that of Lessard, suggesting that a foreign firm is able to accrue benefits from exchange rate risk when the currency is undervalued, thus reducing its operating costs in relation to its local competitors. This relates to the idea of competitive advantage by a foreign firm that was introduced by Kindelberger (1969). The major drawback to this argument is that the currency valuation may be temporary and undervaluation may become an overvaluation, resulting in higher costs than local competition. To a certain extent these fluctuations can be managed with one of the plethora of international financial hedging instruments available, but none of these offer one hundred percent certainty.

However Solnik (1974) found that an uncovered portfolio in terms of exchange rate risk did not do significantly worse than a hedged portfolio. Thus we would anticipate that firms that acquire foreign firms would gain primarily from the international aspect of the acquisition and would not be greatly affected by the exposure to exchange rate risk that may not have been present previously in their operating cash flows.

Tariffs and Trade Barriers. Customs duties are a factor peculiar to international trade. Ragazzi (1973) concludes that the higher the customs duties are relative to the size of the market, the greater the inducement for a firm to make a direct investment. In other words, if the market is large and the customs duties are high, then it may be advantageous for a foreign company to make a direct investment in that country. There has recently been a trend toward protectionism of certain industries in the United States through quotas and higher tariffs on imported goods. There has also been a higher incidence of foreign acquisitions in the United States. This may be coincidental or it may be a direct reaction in order to circumvent the newly imposed or potential barriers to trade.

Cultural Differences. In an international acquisition, the problems with integration of the operations of two firms are exacerbated beyond those experienced by firms merging domestically. Kitching (1967) notes that even if positive synergies do exist, they can be negated by an inability of management to integrate harmoniously. A recent Wall Street Journal article (January 6, 1986) emphasizes this point when describing an acquisition by a British firm of an American business: " . . . there's also a business-culture gap . . . that gap has little to do with language . . . . Rather, culture clashes occur in subtler and often more sensitive areas." Thus the cultural differences between the management of the firms involved plays a more significant role in the case of an international merger.

National Laws. As Schall (1972) points out, diversification is no longer considered a viable ground for mergers under perfect capital markets, as individual diversification makes firm diversification redundant. An exception to this would be the case where individuals from other countries are not allowed by law to invest directly in foreign countries, such as in the case of France and Israel. Under this scenario, if a foreign firm bought a U.S. firm, the individual investor of the foreign country would be able to achieve international diversification benefits that they would not be able to duplicate on their own.

Strategic Realignment. A strategic investment may be defined as an investment that has non-positive NPV, exclusive of any assets that may be created as a result of the investment. Thus acquisitions of U.S. firms by foreign companies may be purely strategic investments, independent of fluctuations in the exchange market. This would help explain why foreign firms do not simply invest in the securities markets to take advantage of temporary exchange disequilibrium. These strategic investments should be such that they offer investors in the foreign firms' securities access to payoffs they could not realize on their own. This would be the case where certain countries do not allow individuals to invest directly in the United States. Thus, we can view the expansion of foreign firms into the United States via acquisition of an existing American enterprise as a strategic investment.

Logue (1981) notes that there are four primary reasons for strategic investment: market enhancement, information enhancement, debt capacity enhancement and future market opportunities. The combination of information enhancement and future market opportunities can be likened to a firm holding a call option in terms of a real asset option.

This can be best described as follows: If there is a lot of uncertainty surrounding a proposed project, a firm may choose to build a smaller prototype of the desired project in order to determine whether the project would in fact be profitable. In the case of foreign multinationals wishing to buy in the United States for the first time to enlarge their market or expand into a new line of business once entrenched in the U.S. marketplace, the choice is one of either building a new plant and creating distribution channels or buying an existing facility. Building the new plant requires a substantial initial investment with a great deal of uncertainty. If the investment does not succeed, then the firm may be burdened with a facility that may not meet anyone else's needs and consequently may be difficult to sell; hence a large downside risk is associated with this method of expanding into the U.S. On the other hand, if a firm buys existing plant capacity through merger or acquisition, then not only does the firm have immediate production and distibution channels already in place, but also an on-going viable enterprise (here we assume that the acquired firm was not in financial distress). Thus in the event the expansion into the U.S. does not meet with success, the foreign firm can sell the acquired firm in the U.S. marketplace with fewer complications than if it had custom built a plant. By acquiring an on-going enterprise in the United States, the foreign firm has effectively reduced its downside risk while simultaneously giving itself an option to grow and to increase its value through market expansion in a foreign country.

Under efficient markets, one would expect that the options of building a plant and making an acquisition would be equally priced, after adjusting for risk. Thus the purchasing firm would be indifferent between the two choices. The fallacy in this argument is that we are considering real assets and not financial securities. The real asset market is not as efficient, and cash flows do not occur instantaneously. The time lag between deciding to build the plant and actual sales generated from the plant could be years. Meanwhile if an on-going enterprise is purchased, cashflows will be realized immediately. Therefore there would be a difference in the price of the two options and acquisition may be more cost effective.

Thus it can be seen that there are several motives for foreign acquisitions to be taking place in the corporate market for acquisitions in the United States. Some of these are identical to those which motivate domestic mergers, but others are unique to the international arena.

CHAPTER III
REGULATORY ISSUES

Legal Issues[1]

Acquisitions by foreign firms of U.S. companies present some legal issues that are not present in domestic mergers. Compliance with U.S. government regulations results in higher transaction costs than would be the case for an American company undertaking the same acquisition. Futhermore, the manner in which the acquisition is handled is influenced by these regulations.

As with domestic mergers, foreign acquisitions can fall into one of three primary categories: (1) tax-free, (2) taxable and (3) partially tax-free and partially taxable. As the third category is a combination of the first two, we shall concentrate on the legalities for tax-free and taxable acquisitions.

Tax-Free Acquisitions. The tax that is realized by the acquired firm's shareholders due to appreciation in their stock from the acquisition is deferred indefinitely until such time as the shareholder sells his shares of stock.

In general there are not as many tax-free foreign acquisitions, as the purchase must be made exclusively or predominately with stock. In addition the acquisition must also meet certain judicial guidelines and must be a reorganization. The stock issued by the acquiring firm must be registered with the Securities and Exchange Commission (SEC) and financial statements must be filed that comply with U.S. generally accepted accounting principles. There is very little consistency in accounting guidelines among European countries. As the Wall Street Journal reported on February 11, 1987: "Even limited European Community regulations now being put into law to establish common accounting standards are meeting resistance." This last requirement can entail high costs for a foreign firm, particularly those from Europe. From the perspective of the stockholders of the acquired firm, these types of transactions would be desirable only if the stocks of the acquiring company were easily tradable in the United States.

Within the tax-free category, there are basically three different types of method of attaining the tax-free status:

(a) Stock-for-Stock or Type B Reorganization: This is simply an exchange of stock of the acquired firm for the stock of the acquiring firm. In order for the acquiring firm to be considered legally in control, they must possess at least 80% of total combined voting power of all stock entitled to vote and at least 80% of the total number of shares of all other classes of stock.

If only the controlling stockholders agree to the acquisition, the foreign firm can still gain control of 100% of the U.S. company by merging a U.S. shell subsidiary of the acquiring firm into the acquired firm. An advantage of using the shell subsidiary is that it allows the parent company to limit the amount of information made public about itself (Guide to Foreign Investment under United States Law, 1979).

(b) Assets-for-Stock or Type C Reorganization: Under these circumstances the assets of the acquired firm are exchanged for stock of the acquiring company. Again, the drawback to stockholders of the acquired firm is ensuring the new stock is easily traded.

(c) Subsidiary merger or Type A reorganization: Only a U.S. subsidiary of the foreign corporation may participate in these types of mergers. Often a shell corporation is created specifically for the purpose of such an undertaking. Under a statutory merger all of the assets and liabilities of the acquired firm are transferred by law to the surviving corporation. If it is a direct subsidiary merger, then the acquired firm is merged into the acquiring firm. If the acquired firm was previously listed on an American exchange, it would be delisted. In a reverse subsidiary merger, the U.S. subsidiary of the foreign firm is merged into the acquired firm. Only one of these was observed in the sample under study. One of the advantages of using a statutory merger as a form of acquisition is that 100% of the targeted firm's shares will be acquired.

Taxable acquisitions. Any gain from appreciation of the stock is taxed to the shareholders of the acquired firm at the time of the acquisition. It may be deferred if the acquiring firm pays with installment notes that are not readily tradeable. The acquiring firm may prefer a taxable purchase if the depreciable assets of the acquired firm have a high value in relation to their tax basis, as this allows the acquiring firm to higher depreciation deductions. The two basic types of taxable acquisitions are (1) asset purchase, whereby the acquired firm sells its assets directly to the U.S. subsidiary of the foreign corporation and (2) purchase of stock, whereby the U.S. subsidiary of the foreign parent acquires the stock of the target firm. The former method is often used when state merger laws do not permit cash mergers. If the latter method is financed by cash it permits acquisition of 100% of the acquired firm's stock. The majority of acquisitions in this study are of this nature.

There are two advantages to the foreign firm of undertaking an acquisition in the United States in this manner. First, it can continue to operate the acquired firm as a subsidiary with the same tax attributes as it had prior to the acquisition. This can not be done with the purchase of assets method. Second, the parent can file a consolidated return, which allows it to offset any interest paid on debt to finance the acquisition against earnings of the acquired firm.

In addition to the regulations pertaining directly to mergers, an acquiring foreign firm is also subject to the same regulations as a domestic firm with regards to market concentration.

Foreign Laws. The individual foreign countries under consideration in this country have different laws which may provide further impetus for acquiring firms in the United States.

Germany does not have any significant exchange-control measures which impede investments. They do have legal merger controls similar to the United States which prevent mergers if a firm will dominate a market as a result of the merger (Cooke 1986, p. 88). Therefore, we might expect German firms to make acquisitions in the United States if they are unable to make an acquisition within their own country without violating merger laws.

France, on the other hand, has strict exchange-control laws on capital movement. They are not as concerned, however, about firms dominating a market domestically (Cooke 1986, p. 90). Thus we would expect to see fewer French firms making acquisitions.

Acquisitions are difficult to make in Japan. This fact may well be reflected in the $9.41 billion invested abroad by Japanese in 1982, an increase of 90% (Cooke 1986, p.102). Thus we would anticipate strategic merger activity by Japanese firms to expand overseas, where they are unable to do so domestically.

Tax Issues

One possible motive for acquiring a firm in the United States is benefits that are available due to the different tax laws in the various countries. The United States has tax treaties in effect with all of the countries in the sample which reduce or eliminate withholding tax on certain forms of income. The other way in which a firm could benefit is if the corporate tax rate on earnings in the United States to which it is subjected is less than that in its home country. The tax treaty also assures that the foreign corporation will receive credit for any U.S. taxes it pays if the earnings are also to be subjected to the home country's corporate tax.

The tax treaties covering investment income earned by foreign corporations in the United States reduce the tax rate from a flat 30% withholding tax to 15% on dividend income. If a firm owns more than ten percent of the voting stock, the withholding tax rate is limited to 5%.

As Table 2 below shows, there is a reduction of taxes that are paid by the foreign firm if dividends are received from a U.S. subsidiary rather than from another U.S. corporation, except in the cases of West Germany and Canada. Thus if a foreign company intends to invest heavily in a U.S. firm, it may be more advantageous, from a tax standpoint, to consider investing to the point where the firm could be considered a subsidiary. Interest income has no advantages associated with it from a tax viewpoint, regardless of whether the interest is received by the foreign parent from its U.S. subsidiary or whether is it from another unrelated corporation.

TABLE 2

U.S. Taxes on Dividend and Interest Income for Foreign Firms

	Dividend Income		Interest Income	
Country	General Tax	U.S. Subsidiary to Foreign Parent	General Tax	U.S. Subsidiary to Foreign Parent
Canada	15%	15%	15%	15%
France	15%	5%	10%	10%
West Germany	15%	15%	0%	0%
Japan	15%	10%	10%	10%
Netherlands	15%	5%	0%	0%
Switzerland	15%	5%	5%	5%
United Kingdom	15%	5%	0%	0%

Source:Manual of Foreign Investment in the United States, p.95.

Table 3 shows the domestic corporate tax rate for the foreign countries under consideration in this study. The United States tax rate at the same time was 46%, which was less than that for France, West Germany, the Netherlands and Great Britain. Thus for certain countries, it is more advantageous for the firm to pay U.S. taxes, receive tax credits for the U.S.taxes paid and pay their home country taxes on income earned overseas than to pay the flat rate in their home country. Although the basic rate in Japan is lower than in the United States, there are taxes associated with local regions that place the total tax bill above the rate for the United States.

TABLE 3

Tax Rates for Foreign Countries on Income Earned Domestically and Overseas

Country	Basic Domestic Tax Rate	Tax Rate on Foreign Income
Canada	46-52%	<10% (portfolio income)--taxed when income is received; foreign tax credits are available. >10% (foreign affiliate)--taxed when received; deductions allowed in computing income tax, which depend on underlying foreign taxes paid and withholding tax paid.
France	50%	foreign branch income and dividend income subject to French equalization tax. Effective tax rate of 3.75% on dividends received from French subsidiaries.
West Germany	36%-50%	<25% ownership--foreign income included in taxable income, unless excluded by tax treaty. >25% ownership--may reduce taxable income by means of foreign tax credit or deduction of foreign taxes as an expense.
Japan	24%-43%	all income subject to Japanese corporate income tax. Tax credit for foreign income tax paid.
Netherlands	42%-48%	foreign branch income subject to Dutch corporate tax. Tax reduced by the ratio of taxable foreign income to total income.
Switzerland	8%-45%	foreign branch income is not taxed in Switzerland, but is taken into account to determine the tax rate applicable to Swiss income.
Great Britain	40%-52%	foreign branch income taxed as earnings; tax credits are available to avoid double taxation.
United States	17%-46%	not applicable.

Compiled from information in Corporate Taxes Worldwide, 1981-1986.

Notes

1. All legal references in this section come from Manual of Foreign Investment in the United States.

CHAPTER IV
RESEARCH DESIGN

Data

The data base for selecting acquisitions made by foreign firms in the United States comes from the quarterly summaries in Mergers and Acquisitions for the five year period, 1 July 1981 through 1 June 1986. An acquisition for the purposes of this study was any purchase of an American company that was reported in Mergers and Acquisitions; these consisted of acquisitions that were valued at more than one million dollars. This included the outright purchase of 100% of the acquired firm, or any amount greater than 80%, which constitutes full ownership; controlling interest, which was defined as greater than 50%, but less than 80%; and less than controlling interest, which was defined as less than 50%. The latter group can be considered acquisitions that are more investments than actual bids for ownership or control of the target firm.

Table 4 breaks down the acquisitions by the amount purchased of a company. It then shows the percentage of the total number of firms acquired by individual countries that fall within each category. The majority of foreign firms from each country included in this study chose to acquire an entire U.S. company. Very few acquisitions were made that resulted simply in controlling interest. Approximately one fourth of the acquisitions made were for less than 50% of the firm, indicating that these purchases may be either for speculative purposes or may be preliminary motions towards a total acquisition of the company concerned. This latter strategy could be considered as a foreign firm holding a call option on a real asset option, i.e., the U.S. company, as discussed previously. Foreign companies also purchased units of large U.S. firms, but to a lesser extent than other forms of acquisition. The majority of acquisitions were made by British firms, followed by Canadian companies. Firms from the other countries in the sample made far fewer acquisitions during the time period under consideration than either British or Canadian companies.

TABLE 4

Percentage of U.S. Companies Acquired by Foreign Firms
Based on the Amount of Interest Purchased
According to Acquiring Country

Country	Amount acquired				
	80-100%	50-79%	<50%	unit	total
Canada	59.5%	4.2%	23.8%	13.3%	145
France	47.7	16.1	25.3	11.4	50
Great Britain	60.0	3.2	18.6	16.2	234
Japan	47.2	8.3	36.2	8.3	36
Netherlands	62.5	3.1	15.6	18.8	34
Switzerland	42.9	3.6	21.6	32.1	28
West Germany	54.2	6.3	25.2	14.6	49

There are some reasons outside of economics that may partially explain why this is the case. Both of these nations are English speaking and both have direct or indirect links to the United States throughout history. The United Kingdom was once a world-wide trading nation, with ties in both the United States and Canada. Canada is part of the Commonwealth system of Great Britain and hence still has many business ties with that country. Geographically, Canada has the closest proximity to the United States of all countries included in the study which makes it easier for Canadians to evaluate and become familiar with the U.S. market.

The sample for this study was chosen in the following manner: First, only those countries where the greatest number of acquisitions originated were included (Table 5). These are also countries that have readily obtainable data.

TABLE 5

Percentage of U.S. Companies Acquired by Foreign Firms on a Yearly Basis According to Acquiring Country

Country	Year						
	1981	1982	1983	1984	1985	1986	total
Canada	19.3%	20.0%	11.7%	17.9%	20.7%	10.3%	145
France	22.0	26.0	10.0	20.0	18.0	4.0	50
Great Britain	13.7	24.8	12.0	16.7	20.9	12.0	234
Japan	13.9	13.9	8.3	25.0	30.6	8.3	36
Netherlands	14.7	17.6	11.8	23.5	20.6	11.8	34
Switzerland	3.6	21.4	17.9	10.7	42.9	3.6	28
West Germany	18.4	24.5	4.1	16.3	30.6	6.1	49
Total							576

Those firms from many different countries with less developed capital markets were not included in the study.

These firms made only one or two acquisitions over the entire sample period (Appendix A), which would have less impact on the overall U.S. economy than those from Britain or Canada. Secondly, only manufacturing or industrial firms that were not in regulated industries were chosen for inclusion. This eliminated acquisitions that took place in the financial, railroad and utility industries. Real estate was also excluded, as those transactions do not have direct product output associated with them. The screening of the data left a total of 539 firms from seven different countries in the final sample. The countries represented include Great Britian, Canada, West Germany, France, Japan, the Netherlands and Switzerland.

It should be noted that for legal reasons mentioned earlier, many of these acquisitions were actually carried out by American subsidiaries or units of the foreign parent. The firm-specific data, however, examines the financial position of the parent company. There is one firm, International Thompson Newspapers, that is considered to be a Canadian firm, as all of its activities orginate from Canada. It is registered as a British company, however. For the purposes of this study, it is considered as a Canadian enterprise. In the sample, there are more government-related firms from France making acquisitions than from any other country. This is undoubtly due to the strict exchange-control laws France maintains, which makes it more difficult for private industry to invest overseas.

France is also more of a socialist nation and would have more nationally controlled companies than other countries in the sample.

All of the firm-specific data, i.e. cash, sales, earnings before interest and taxes, long-term debt, total assets, equity, previous acquistions either in the United States or another foreign country was collected from Moody's International Manual for the various years under observation. With the exception of cash and sales, all figures were recorded in the home currency. Cash and sales were converted into a common currency, and the U.S. dollar was chosen. The exchange rate for the conversion was taken from the Wall Street Journal on the same day as the financial statement in question. The data was collected for the year prior to the actual observation of an acquisition becoming effective, in order to examine the financial characteristics prior to the acquisition. For those firms that made acquisitions in successive years, the data was collected in the same manner, although an acquisition may have taken place during that year. If data was unavailable for a specific firm for a given year, that observation was eliminated from the sample.

The percentage of acquiring and non-acquiring firms with previous U.S. and/or other overseas experience are described in tables 6 and 7. We can see that the only country where many acquiring firms have already had previous business experience in the United States is

Canada. This is probably related to its geographic proximity, as non-acquiring firms also show a much higher incidence of firms with only previous U.S. experience.

TABLE 6

Percentage of Foreign Acquiring Firms' Previous Overseas Acquisition Experience by Country

Country	Type of Experience				
	None	Only US	Only other Foreign	Both US & Foreign	Total no. of Deals
Canada	7.2%	30.9%	5.2%	56.7%	97
France	2.9	5.7	11.4	80.0	35
Great Britain	3.2	1.9	4.5	90.4	157
Japan	8.3	8.3	4.2	79.2	24
Netherlands	0	0	7.7	92.3	26
Switzerland	0	0	0	100.0	16
West Germany	11.1	0	0	88.9	27

TABLE 7

Percentage of Foreign Non-Acquiring Firms' Previous Overseas Acquisition Experience by Country

Country	Type of Experience				
	None	Only US	Only other Foreign	Both US & Foreign	Total no. of Deals
Canada	52.6%	27.6%	2.6%	17.1%	76
France	50.0	0	34.6	15.4	26
Great Britain	13.6	0.8	39.8	45.8	118
Japan	12.5	0	8.3	79.2	24
Netherlands	30.0	0	35.0	35.0	20
Switzerland	9.1	0	0	90.1	11
West Germany	30.4	0	8.7	60.9	23

In general, we observe that the vast majority of acquiring firms have already had previous operating experience in both the United States and other foreign countries. Non-acquiring firms have a much lower rate of previous experience in both the United States and other foreign countries. What is particularly noticable is that non-acquiring firms from all countries, with the exception of Canada, have had no previous U.S. experience and are more likely to have no previous foreign experience of any kind than acquiring firms. Switzerland is the exception to this latter statement, as it has the smallest non-financially based economy of among the group of countries considered.

The data relating to industry classification for both acquiring and target firms was obtained from Mergers and Acquisitions and Predicasts. (See Appendix B for the SIC codes.) Table 8 shows the number of acquisitions made by firms from each country for broad industry classifications according to the acquired firm.

TABLE 8

Number of Acquisitions in General SIC Categories According to Acquiring Country

Country	General Category and SIC Codes			
	Agriculture (01-09)	Natural Resources (10-14)	Construction (15-17)	Food (20)
Canada	0	17	0	5
France	1	1	0	3
Great Britain	1	14	2	19
Japan	0	0	1	2
Netherlands	0	2	0	4
Switzerland	1	0	0	3
West Germany	0	1	0	0

TABLE 8 continued

Number of Acquisitions in General SIC Categories According to Acquiring Country

Country	General Category and SIC Codes			
	Textiles (22-23)	Lumber (24-25)	Paper and Publishing (26-27)	Chemicals (28-29)
Canada	0	1	28	8
France	0	0	1	4
Great Britain	5	1	14	18
Japan	1	0	0	5
Netherlands	1	0	7	3
Switzerland	1	0	0	4
West Germany	0	0	1	11

	Manufacturing (30-39)	Transportation (42-47)	Communication (48)	Sanitation (49)
Canada	30	3	4	3
France	19	1	0	3
Great Britain	72	3	2	0
Japan	14	0	0	1
Netherlands	6	1	0	0
Switzerland	11	0	0	0
West Germany	17	1	0	0

	Distribution (50-51)	Retail (52-59)	Personal Services (70-72)	Business Related (73-737)
Canada	1	12	2	6
France	2	5	0	1
Great Britain	10	13	1	14
Japan	1	0	0	4
Netherlands	0	1	0	1
Switzerland	0	1	1	1
West Germany	4	5	0	1

	Entertainment (75-79)	Service Related (80-89)	Non-Classified (98-99)
Canada	1	4	8
France	0	3	2
Great Britain	3	8	11
Japan	0	1	2
Netherlands	0	1	0
Switzerland	0	2	1
West Germany	0	0	4

The Canadian companies invested very heavily in the natural resources industries and newspapers and, to a lesser degree in retain stores and manufacturing--primarily machinery, other than electrical. The concentration in oil and gas may be related to a tax that the Canadian government imposed in the early 1980s that sent many Canadian oil and gas firms to the United States.

Acquisitions by French companies were focused on the manufacturing sector, with electrical machinery being the most sought after. French firms also made several acquisitions of retail stores to a greater degree than other countries, with the exception of Britain. Service related firms were also a target of French acquirers with sanitation type companies being of particular interest.

Firms from Great Britain are dispersed across all industries but have concentrated acquisitions in the food industry, the chemical industry and machinery (including electrical). They have made acquisitions on a smaller scale in natural resources--primarily oil and gas, wholesale and retail businesses, and business related services. The business related services increased as a result of several purchases that were completed in a two year time period. These were initiated by one advertising agency, Saatchi and Saatchi, that were part of an acquisition program the company has undertaken in the United States.

The Japanese acqusitions appear to be concentrated in industrial manufacturing, especially machinery (including electrical). They also made a number of acquisitions in the chemical industry and the business related services area. The latter area may be a result of attempting to vertically integrate with their own computer and data processing firms.

Publishing companies and manufacturng concerns were the primary targets of Dutch firms, followed by food and chemical firms. The Swiss firms, as with all other countries, concentrated on the manufacturing sector but with an emphasis on precision instruments. The chemical and food industries were also targets for Swiss activity. The large food concern, Nestle's, was responsible for all acquisitions the food industry.

A large number of U.S. companies bought by German firms were in the chemical industry. This may be related to the merger concentration index that Germany has, which might force German firms to make acquisitions in the United States as they were unable to make such acquisitions in their home country. Machinery manufacturing companies were also popular targets with the Germans, as were wholesale and retail stores.

A factor that affects acquiring firms, but not those that do not make acquisitions, is the relatedness of the operations of the acquiring and the target firms. It is hypothesized that if the operations of the acquiring firm and the acquired firm are related, one would anticipate the probability of acquisition to be greater, particularly if the firm has made no previous acquisitions in the United States.

In order to assess the extent to which integration of operations can be achieved from a production standpoint, the work of Salter and Weinhold (1979) and Rumelt (1974) was employed. Rumelt identified three relationships that were shown to be significant for predicting the profitability of corporations. The first of these, the specialization ratio, is an indicator of the extent to which the company depends on a single narrow product line as the source of cash flows. The related ratio is less restrictive; it focuses on complementary operations that have one or more components (such as technology, distribution channels, raw material inputs, etc.) in common. Rumelt shows that companies that have higher related ratios also tend to be more profitable. The final relationship, the vertical ratio, indicates the extent to which the firm is vertically integrated. High levels of vertical integration tend to be associated with low profits, most likely because of the inflexibilities associated with vertical operations as consumer tastes, regulations or other market characteristics shift.

A two digit SIC classification code was used to determine the relatedness of two firms' lines of business. An acquired firm and acquiring firm from the same industry were considered to be horizontally integrated. Firms that were from similar industries were placed in the vertical integration category and those that were totally unrelated were deemed conglomerate mergers. Units of firms that were acquired were considered using their own line of business, rather than that of the parent company, as the unit itself was relevant, not the parent's line of business.

We can observe from Table 9 that very few firms in any given country made totally unrelated acquisitions. The highest percentage of firms that made unrelated acquisitions came from the United Kingdom with 16.6%. This is probably due to the fact that several firms in the United Kingdom, such as Hanson Trust and the Charterhouse Group, specialize in making foreign acquisitions in order to increase the value of their firm.

TABLE 9

Relative SIC Codes and the Number of Acquisitions made each Year according to Country of Acquirer

Number of Acquisitions each Year

CANADA

Relative SIC codes	1981	1982	1983	1984	1985	1986	Total
Unrelated	3	7	2	1	3	2	18
Same	21	18	12	22	19	7	99
Related	4	4	3	3	8	5	27

TABLE 9 continued

Number of Acquisitions each Year

FRANCE

Relative SIC codes	1981	1982	1983	1984	1985	1986	Total
Unrelated	1	2	0	1	1	0	5
Same	9	8	4	6	7	1	35
Related	1	3	1	3	1	1	10

GREAT BRITAIN

Relative SIC codes	1981	1982	1983	1984	1985	1986	Total
Unrelated	7	9	4	3	11	4	38
Same	15	44	12	25	22	15	133
Related	10	5	12	10	13	8	58

JAPAN

Relative SIC codes	1981	1982	1983	1984	1985	1986	Total
Unrelated	2	0	0	0	2	0	4
Same	2	5	1	9	8	3	28
Related	1	0	2	0	1	0	4

NETHERLANDS

Relative SIC codes	1981	1982	1983	1984	1985	1986	Total
Unrelated	0	1	0	1	0	0	2
Same	4	2	4	4	3	2	19
Related	1	3	0	2	4	2	12

SWITZERLAND

Relative SIC codes	1981	1982	1983	1984	1985	1986	Total
Unrelated	2	0	0	1	0	0	3
Same	1	2	1	3	7	1	15
Related	0	2	4	0	3	0	9

TABLE 9 continued

WEST GERMANY Relative SIC codes	Number of Acquisitions each Year 1981	1982	1983	1984	1985	1986	Total
Unrelated	0	2	1	0	1	0	4
Same	5	5	0	7	9	2	28
Related	4	5	1	1	5	1	17

The majority of acquisitions are made within the same industry classification. This suggests that the foreign firms may be transferring skills in an attempt to manage a U.S. company better, thereby achieving gains through more efficient management and also obtaining greater market share.

We can extend this analysis further to see if firms that already have prior operating experience in another country are more likely to make an acquisition outside their own industry. Table 10 evaluates the percentage of firms within each country that make acquisitions in the same, similar or different industry, based on their previous foreign operating experience. In every case the only firms that made acquisitions in totally unrelated industries were those that had previous overseas experience in both the United States and abroad. Most firms from all countries had had experience both in the United States and overseas and still chose to make an acquisition in the same industry. This suggests that geographic rather than product diversification is the goal of these firms.

TABLE 10

Choice of Target Industry Relative to Acquiring Firm's Industry Classification based upon Previous Acquisition Experience

Previous Acquisition Experience

CANADA
N = 97

Choice of Target Industry	None	Only US	Only other Foreign	Both US & Foreign
Same Industry	4.1%	22.7%	4.1%	39.2%
Similar Industry	2.1	7.2	1.0	9.3
Unrelated	1.0	1.0	0	8.2

FRANCE
N = 35

Choice of Target Industry	None	Only US	Only other Foreign	Both US & Foreign
Same Industry	2.9%	5.7%	8.6%	48.6%
Similar Industry	0	0	0	20.0
Unrelated	0	0	2.9	11.4

GREAT BRITAIN
N = 155

Choice of Target Industry	None	Only US	Only other Foreign	Both US & Foreign
Same Industry	0.6%	1.3%	2.6%	80.0%
Similar Industry	2.6	0.6	1.9	21.3
Unrelated	0	0	0	17.4

JAPAN
N = 24

Choice of Target Industry	None	Only US	Only other Foreign	Both US & Foreign
Same Industry	4.2%	4.2%	4.2%	62.5%
Similar Industry	4.2	4.2	0	4.2
Unrelated	0	0	0	12.5

TABLE 10 continued

Previous Acquisition Experience

NETHERLANDS
N = 26

Choice of Target Industry	None	Only US	Only other Foreign	Both US & Foreign
Same Industry	0%	0%	3.8%	53.8%
Similar Industry	0	0	3.8	34.6
Unrelated	0	0	0	3.8

SWITZERLAND
N = 16

Choice of Target Industry	None	Only US	Only other Foreign	Both US & Foreign
Same Industry	0%	0%	0%	56.3%
Similar Industry	0	0	0	37.5
Unrelated	0	0	0	6.3

WEST GERMANY
N = 27

Choice of Target Industry	None	Only US	Only other Foreign	Both US & Foreign
Same Industry	7.4%	0%	0%	51.9%
Similar Industry	3.7	0	0	29.6
Unrelated	0	0	0	7.4

How the acquisition was financed, e.g. stock, cash or some other method, and the amount of the target firm acquired also was obtained from Mergers and Acquisitions. As can be seen from Table 11, of those transactions where the method of payment is known the overwhelming majority were cash transactions. This relates to the legal issues discussed earlier that pertain to a foreign corporation's ability to issue and sell stock in the United States.

TABLE 11

Payment Method

Method	Frequency
Cash	115
Stock	14
Debt	1
Other	27
Unknown	157
TOTAL	419

For each firm that had made an acquisition during the time period of the study, another firm from the same country of origin and in the same industry, as defined by the SIC classification code, that had not made an acquisition in the United States during the sample time period was found. This was necessary for the logistic regression. Financial data for a non-acquiring firm was collected for the same year as the acquiring firm with which it was associated.

Exchange rates are collected on a weekly basis from the Wall Street Journal for the period July 1. 1981 to June 1, 1986.

Statistics for the gross domestic product were obtained from the International Monetary Fund Statistics. The business correlation between countries is measured by calculating the correlation between countries using the percentage change in gross domestic product on a yearly basis as a proxy for business trends over a specific period. Ten year periods prior to each acquisition year under consideration were used to calculate the change in gross domestic product correlations of the individual countries with the United States.

Statistics pertaining to real rates of interest, wages, industrial production, and manufacturing employment were obtained from International Monetary Fund Statistics. The real rate of interest was calculated by using bond yields for each country less that country's rate of inflation, as measured by the change in the consumer price index. The difference between each country's real rate of interest and that of the United States was computed and employed in the principal components analysis. Likewise, the difference between the individual countries and the United States was found for wages, industrial production and manufacturing employment.

Cultural proximities were calculated using Hofstede's (1980) data from Culture's Consequences: International Differences in Work-Related Values.

Tariffs and trade quotas were obtained from the U.S. Customs regulations.

International corporate tax structures were obtained from Price Waterhouse, for years 1980 through 1986.

Hypotheses

Principal Components

Many theories have been forwarded as to why direct foreign investment takes place in the United States. These studies identify several different variables that are considered to be motivating factors in determining whether a foreign firm will make a direct investment in the United States (or whether an American firm will make a direct investment in a foreign country). What has not been established is which of the individual factors provide the most information to the acquiring firm, as to whether or not the economic environment is condusive to direct foreign investment. In order to determine which of these variables do in fact offer more information to a firm that wishes to make a direct foreign investment in the United States, a principal components analysis will be conducted. This analysis will enable us to identify a reduced set of macroeconomic variables that are of relatively greater importance to a firm interested in making a foreign acquisition. This can also be extended to firms making investments in other foreign countries than the United States, given the assumption that firms look for the same basic macroeconomic attributes when making a foreign direct investment.

There are several benefits to employing principal components at this stage in the study. First, we are primarily interested in determining which of the variables have greater explanatory power, thus enabling us to examine fewer variables when discussing the macroeconomic motivators of direct foreign investment. This reduced set of variables then can be employed in further analyses.

Second, principal components does not require any of the usual statistical assumptions about the underlying distributions of the variables. As a result, the problem of multicollinearity often encountered with regression analysis is overcome, as the principal components are not intercorrelated.

Principal components are linear combinations of the original variables:

$$C_1 = a_{11}X_1 + a_{12}X_2$$
$$C_2 = a_{21}X_1 + a_{22}X_2$$

where

C_i are the principal components,

a_{ij} are the coefficients on the original variables, and

X_i are the original variables.

The principal components have the property of preserving the total variance, and are arranged in order of decreasing variance, so that the most informative component is the first and the last component is the least informative.

In order to determine how to interpret the principal components in terms of the original variables, a closer examination of the coefficients is necessary. If there is a high coefficient of a principal component on a given variable, this tends to indicate that a high correlation exists between that variable and the principal component. The correlation between a principal component and the original variable is measured as:

$$r_{ij} = \frac{a_{ij}\ (\mathrm{var}\ C_i)^{1/2}}{(\mathrm{var}\ X_j)^{1/2}}$$

where

r_{ij} is the correlation between the variables,

a_{ij} are the coefficients on the original variables,

var C_i is the variance for the i^{th} principal component, and

var X_j is the variance for the j^{th} original variable.

It is hypothesized that the following factors will be significant in being able to determine from which countries acquiring firms will orginate: (1) correlation of foreign gross domestic product with U.S. gross domestic product, (2) deviations in the exchange rate, (3) real rates of interest, (4) employment rate in the manufacturing sector, (5) wages differentials between the U.S. and the acquiring country, (6) the level of industrial production, (7) cultural differences, (8) individual investment barriers, (9) tax considerations, and (10) tariff barriers.

We hypothesize that the variables will have the following characteristics if they are to be of significance:

(1) The percentage change in Gross Domestic Product of the foreign country has a low correlation with that of the U.S. If diversification of operating cash flows is an important consideration in identifying potential acquisitions, then either selecting countries where the economies are relatively uncorrelated or choosing industries whose returns have a low correlation with the acquiring firm's industry would be most likely. An

indicator for the extent to which countries' economies move together is the correlation between changes in the Gross Domestic Product (GDP) of the countries involved. The hypothesis is that a firm would prefer to invest in countries where this correlation is either low or negative when industrial operations have correlated returns, and vice versa.

(2) Assuming international mobility of capital, it is hypothesized that there will be more acquisitions in the United States by companies from countries where purchasing power parity of the local currency with the U.S. dollar is in disequilibrium. In other words, when the dollar is worth less in terms of foreign currency, thereby enabling purchasers to use less of their currency to buy an American firm than would be the case if the currencies were in equilibrium, as defined by relative purchasing power parity. Furthermore, the greater the distortion observed, the higher the level of anticipated acquisition activity.

(3) If the real rate of interest is lower in the United States compared to the home country. Kindleberger (1969) noted that firms abroad prefer to use local financing whenever possible in their operations. Therefore, one expects to find more acquisitions in the United States if the real rate of interest is lower than in the home country in order to reduce capital costs.

(4) If the employment rate is higher in the United States than the home country. This would indicate that the

economy is stronger in the United States. Workers are available for labor and there is a market for the finished product.

(5) If the wages are less in the United States than in the home country. This would lower one of the factors of production. If the good was highly labor intensive, this could reduce overall production costs.

(6) If the level of industrial production was higher in the United States. This would indicate that the economy was stronger in the United States and that there would be a larger market available in which to sell the goods.

(7) If there are fewer cultural differences, as this would imply that integration of operations from a personnel and managerial perspective would be easier and would increase the chances that the acquisition will be successful in the long-run. In order to measure this, a theory propounded by Hofstede (1980) relating to cultural differences between countries was used to determine the complementarity of management practices and philosophies, and hence the ease of management integration of operations from different countries. There are four dimensions of culture that Hofstede deems important for this purpose: (a) uncertainty avoidance--this refers to the extent to which ambiguity and uncertainty are tolerated in a society; (b) individualism--this describes the extent to which the individual is the primary focus of activity; (c) masculinity--this characteristic measures the extent to

which a society values an orientation that can be described as male dominated by nature; (d) power distance--the extent to which hierarchical inequality is accepted as the norm in a society. The hypothesis is that the more heterogeneous the cultural climates, the less likely a merger will take place.

(8) If individual investment barriers exist, we would anticipate more acquisition activity by corporations from those countries where individuals are not permitted by law to make financial securities investments directly. The acquisitions made by companies from a foreign investor's own country would enable the individual investor to take advantage of international diversification indirectly, by investing in the acquiring corporation in their home country.

(9) If corporate taxes are lower in the United States. Many countries have higher corporate tax rates than those assessed in the United States. By purchasing a U.S. company, the foreign firm may be able to take advantage of these lower rates. This in turn implies that lower income before taxes will still allow the firm to earn more after taxes due to less taxes paid. Thus we would expect to see more firms acquiring from countries where the tax rate is higher than that prevailing in the United States.

(10) If tariff barriers are high for specific products from a particular nation relative to other nations, or are expected to rise in the near future. The hypothesis is

that firms would then wish to position themselves as an American firm, thus circumventing future barriers to exportation.

The principal components analysis employs all of the above ten variables to determine which provide the most information about the relative operating environments to acquiring foreign firms.

Logistic Regression

A model that has predictive power as well as explanatory power in determining whether or not a foreign firm is predisposed to acquiring U.S. companies is of more value than one that is simply explanatory in nature. The use of logistic regression enables us to classify foreign firms into one of two categories: those that have characteristics that suggest that acquisition of a U.S. company is probable and those where the probability of a U.S. acquisition is low. This technique has an advantage over discriminant analysis for classification purposes in that it does not require the assumption of multivariate normality and thus allows for the independent variables to be either continuous or categorical in nature. If normality does not hold (such as for categorical variables), then in the case where the coefficient is not zero, discriminant analysis will give biased results (Halperin, Blackwelder and Verter, 1971).

Furthermore, logistic regression provides statistics for the individual independent variables to determine their level of significance. It also provides a screening device that helps identify those variables that are contributing to classsifying firms. Overall logistic regression has been shown to provide more consistent estimators than those that can be obtained using discriminant analysis, particularly when the data are not normal, as is true in this case.

In order to determine the logistic regression equation, it is necessary to take a random sample of firms over a specified time period. From this two subsamples emerge, one containing those firms that acquired U.S. firms and another where no such activity took place. This cross-section sample enables us to obtain the estimated logistic regression equation.

A logistic regression can be run cross-sectionally on the model:

$$Y = a + b_1X_1 + b_2X_2 + \ldots + b_nX_n$$

where Y is the dependent variable, either acquire a U.S. firm or not, in binary form,

a is the intercept term,

b_i are the parameter estimates,

X_i are the independent variables.

From this we can determine the logistic regression equation which will show the probability of a firm belonging to population I (acquirer of U.S. firms):

$$P = \frac{1}{1 + \exp[-(a + b_1X_1 + \ldots + b_nX_n)]}$$

There are two methods by which the coefficients can be determined: maximum likelihood and linear discriminant function. Press and Wilson (1978) discuss the relative advantages of both methods and conclude that the maximum liklihood method provides more robust estimates. This is the method that will be employed in calculating the logistic regression equation.

Prior to fitting the model, an efficient score statistic to test the global null hypothesis that all regression coefficients are zero will be calculated. This determines whether any modelling is worthwhile. The model chi-square tests the hypothesis that the set of variables is useless in classifying firms. A large value for this (or a small P value) indicates that the variables are useful for classification purposes.

By incorporating firm-specific factors of foreign firms into a logistic regression, it is possible to identify specific characteristics of foreign acquirers. Hence one can determine which foreign firms have a high probability of acquiring a U.S. company in the future. It is hypothesized that the following factors will be significant in being able to classify firms: (1) a firm's acquisition history in the United States; (2) a firm's acquisition history abroad, but not in the United States; (3) cash; (4) sales; (5) profitability from operations, as measured by EBIT/TA; and (6) leverage, as measured by long-term debt to total assets.

We would anticipate classifying a foreign firm into a group that has a high probability to acquire a U.S. company if the following characteristics are present:

(1) If a firm has a prior history of acquiring firms in the United States, then we would expect it to have a higher probability of continuing to make acquisitions. This is because it will have already invested time and money in learning how to operate and survive in the American business environment. Therefore its costs in expanding further in the United States will be less than for a firm that has never made an acquisition in this country. We might further expect that a firm that has had previous operating experience in the United States will not necessarily choose to remain in its principal industry; that it will choose to diversify on a product line basis, as it is already diversified geographically.

(2) Firms that have already diversified geographically by operating in another country other than their home country or the United States, could be expected to broaden their markets or diversify into the United States, more so than a firm that has has no experience outside of the home country. Firms that are located in Europe and Asia would be more likely to have expanded first into countries that are located nearby geographically than into the United States. Canada on the other hand would be expected to have

fewer foreign operations other than in the United States due to their close proximity to this country. Great Britian is the only other English speaking country in the sample and also has Commonwealth ties to Canada, and so may be more familiar with United States businesses than other European firms. Hence more acquisitions would be expected from Great Britian than other European countries.

(3) Given that a foreign firm has greater legal difficulties financing an American acquisition through stock or other securities, the majority of U.S. acquisitions are purchased with cash as the medium of exchange. Thus, we would expect to see acquiring firms having larger cash balances prior to making any acquisitions than those firms that do not make acquisitions in the United States.

(4) Sales is a variable that as it increases should give an indication of whether a firm is expanding by acquiring in the United States. In order to maintain a proportionate level of sales, it may be necessary for a firm to seek larger markets. Hence, an acquisition in the United States would give a foreign firm direct access to the large U.S. marketplace. Thus, we would expect to see firms with larger sales making acquisitions.

(5) Profitability from operations is measured using the ratio of a firm's earnings before interest and taxes to total assets. This reflects solely how profitable a firm is before the magnifying effects of leverage are taken into

account. As we are examining firms across different nations, which have different tax laws and attitudes concerning the use of debt, this figure is more consistent across countries than net income. We would expect a foreign firm that is not doing well purely from operations alone, not to make a 100% acquisition of a U.S. firm. However, such a firm may be doing well with their use of debt and other financing activities and may invest in a U.S. company, but not to the extent where they control it. Thus we would expect firms with larger positive earnings from operations to acquire entire U.S. companies, while those with smaller or negative returns from operations to either take less than controlling interest in a U.S. company or not undertake any such acquisition.

(6) Firms that have large proportions of debt relative to their total assets may choose to make an acquisition in order to obtain more debt capacity. By acquiring a U.S. firm this will also provide them with easier access to American money markets, enabling them to either raise more debt or equity capital. One must bear in mind that other countries with the exception of Japan are more likely to finance with bonds rather than equity, so it is necessary to compare debt ratios within countries and across industries within a country.

Given the above hypotheses, a logistic regression was run to determine if one is able to classify foreign firms as to whether they have a propensity to acquire American companies using the factors described.

CHAPTER V
EMPIRICAL RESULTS

Principal Components

Each of the variables under consideration in the principal components analysis was examined in terms of the acquiring country relative to the United States. For example, the difference between the real rate of interest in the United States and that in the acquiring country was calculated. The differential was also computed for tax rates and homogeneity factors between the United States and the acquiring country.

Wages, manufacturing employment and industrial production were all measured originally in terms of an index based on the year 1980. Thus differences in the indices were calculated for these factors. The correlation for changes in the gross domestic product between the United States and the acquiring country were employed as a measure of business cycle trends between countries.

There was only one country with any significant individual investment barriers--France. As a result, this variable was dropped from the analysis. We hypothesized earlier that we would anticipate more acquisitions from such a country. This was not the case. However we find that there are more government controlled corporations making acquisitions than is the case for any other country.

All of the countries under consideration in the sample were in the same tariff classification for import taxes. As a result, no significant difference could be found across countries that would suggest that specific tariffs would be the motivating factor for foreign investment in the form of acquisition in the United States. It may, however, still be of importance for firms that have elected to build a plant in the United States, thereby making a long-term commitment. Thus, this variable was also eliminated from the analysis.

Relative purchasing power parity between the U.S. dollar and the home currency of the acquiring firm was calculated as:

$$\frac{S_{t+1} - S_1}{S_1} = i_{US,t} - i_{AQ,t}$$

where

S_{t+1} is the exchange rate between the U.S. dollar and the acquiring firm's home currency at time t+1,

S_1 is the exchange rate at time t,

$i_{US,t}$ is the inflation rate in the United States at time t, measured using the change in the consumer price index, and

$i_{AQ,t}$ is the inflation rate in the acquiring firm's home country at time t, measured using the change in the consumer price index.

Having determined each of the individual factors that were to be employed in the principal components analysis, the analysis was then run. The first four principal components explained 79.77% of the total variance, and could thus be considered representative of all of the variables that were originally included in the analysis. The inclusion of the fifth component would only provide an additional 6% explanatory power, which is not a significant increase. The first two principal components alone explained over 48% of the total variance.

When interpreting the individual components, it is necessary to examine the coefficients of the components to provide some meaning of the component under consideration. It should be recalled that a high absolute coefficient on a given variable is indicative of a high correlation between that particular variable and the component.

The first principal component showed that the homogeneity factor representing cultural proximity with the United States had the highest coefficient. This was followed closely by taxes and the real rate of interest, both of which had high negative coefficients. The other variables did not have coefficients greater than .40, which was the cut-off point for inclusion. Thus we can interpret the first principal component as indicating that the primary factors for determining acquisitions in the United States depend upon the cultural proximity, the real rate of interest and the comparative level of taxes. The closer the cultural proximity, the more likely firms will be to acquire in the United States. If the real rate of interest in the United States is lower than the home country, then this would be a revelant factor in determining whether or not a firm would make an acquisition in the United States.

This would imply that firms would have lower borrowing costs if they were to finance their new operations in the United States. Finally, the lower taxes in the United States are an incentive for considering investment in the United States.

The second principal component can be thought of as relating to production possibilities. The coefficient for industrial production is dominant in this case, but related to this are employment levels and purchasing power parity. This suggests that firms from countries where industrial production is lower than that in the United States would consider making a acquisition in the United States as well as firms from countries where the employment level is lower. The other factor related to this component is purchasing power parity.

The third component is dominated by correlations between the changes in gross domestic products between the two countries. Thus, this component is concerned with the business cycles of the countries. The final component included is heavily dominated by the wage component and the relative cost of wages between the countries.

If we examine the first and second components, we can see that Japan and Switzerland are definite outlyers. These countries also have fewer acquisitions than the others. Looking at the characteristics of the individual variables for these two countries, we can see that Japan is further removed culturally, it has lower wages, higher industrial production, exhibits greater deviations from purchasing power parity, has lower real rates of interest and lower taxes. Switzerland also exhibits similar characteristics, except it is closer culturally. Thus, this would agree with the assessment of the principal components.

Many articles have appeared in the popular financial press suggesting that purchasing power disequilibrium alone could account for foreign acquisition activity in the United States. Several tests were run employing a version of relative purchasing power parity mentioned by Officer (1976) to determine whether any statistical differences existed between the actual exchange rate and that predicted by relative purchasing power parity for each country over the five year period. Relative purchasing power parity was computed as follows: $(CPI_b/CPI_{us})*FX$. A paired comparisons test was run which tested whether the mean difference between the two values over the period was significantly different from zero. As expected, there was no significant deviation from the exchange rate predicted by purchasing power parity for any country over the entire five year period.

Examining exchange rates on a more short-run basis, where temporary deviations in purchasing power parity might be more evident, the absolute difference between actual and predicted exchange rates was examined, as well as the relative differences.

The absolute difference between actual and predicted exchange rates was calculated as: DIFF = FX - FXPPP where

DIFF is the difference between the two rates,
FX is the observed exchange rate, and
FXPPP is the relative purchasing power parity.

For Canada, the United Kingdom and France this difference was found to be less than zero for all years. This means that the predicted exchange rate is greater than the actual exchange rate observed each month. The implication of this is that the dollar is cheaper than anticipated in relation to the currency of that country.

It can be seen that the majority of acquisitions did indeed come from these three countries. Of a total of 576 acquisitions made during the five year period under investigation, 145 came from Canada, 234 came from the United Kingdom and 50 from France. This accounts for almost 75% of all acquisitions. When this activity is examined on a monthly basis, there are numerous acquisitions during the last half of 1981, a period when the discrepancy between the two rates is small and fewer acquisitions would be anticipated. In the remaining years however, greater acquisition activity is noticable when the difference between actual and predicted rates is comparatively large. As all countries in the sample exhibit a large amount of activity during the latter portion of 1981 (with the exception of Switzerland), it would suggest that factors other than exchange rates influenced acquisition activity, as the difference between actual and predicted values are very close during this period in all cases.

For West Germany, Japan and Switzerland who together account for approximately one fifth of the total number of foreign direct investments in the United States, the difference between the actual and the predicted exchange rate was positive, indicating that the actual exchange rate for each month was greater than that predicted by relative purchasing power parity. This implies that the dollar is seemingly more expensive than it should be for these currencies at each point in time. Thus we would expect to see more acquisitions from these countries when the difference between the two values is small. This is indeed the case for all years except in 1985 when acquisition activity from these three countries accounted for over a third of each country's total acquisition activity for the entire five year period, suggesting some other factor is in play.

The relative difference was computed as the percentage difference between the actual and the predicted exchange rate:

$$[(FXPPP*100)/FX] - 100 = \%DIFF$$

where

%DIFF is the percentage difference between actual and predicted values,

FXPPP is the relative purchasing power parity,

FX is the observed monthly exchange rate.

This enables one to compare the relative strength of one currency against another. From this it is possible to analyze the pattern of acquisitions and judge the extent to which purchasing power parity disequilibria may affect direct foreign investment activities.

When comparing the relative strengths of the individual currencies with each other, we would anticipate more acquisition activity from those countries where the percentage difference between the actual and the predicted exchange rates is small. On an absolute number basis, the U.K., West Germany and Switzerland have comparatively smaller differences, followed closely by Canada. Indeed acquisition activity is dominated by firms from the United Kingdom. France shows by far the greatest percentage difference change between actual and predicted values, however we find their activity to be comparable to that of Germany over the same time period. The same holds true for Japanese firms which also showed a relatively high percentage difference.

Logistic Regression

The first logistic regression examined was on the total sample to determine the probability of classifying a foreign firm correctly as to its propensity to acquire a U.S. firm, based on specific operating characteristics of the foreign firm. Thus, all the variables that were relevant to both acquiring and non-acquiring firms were included in the model:

Log odds of acquiring = profitability from operations + leverage + cash + sales + previous U.S. experience + previous foreign experience

where

profitability from operations for the year prior to the acquistion is measured by earnings from operations divided by total assets,

leverage is the leverage position of the firm for the year prior to the acquisition, measured by long-term debt divided by total assets,

sales is the total sales figure for the year prior to the acquisition,

cash is the short-term liquidity position of the firm for the year prior to the acquisition,

previous U.S. experience is the prior United States operating experience, and

previous foreign experience is the prior overseas operating experience of the firm, excluding the United States.

The global chi-square score statistic was computed first to determine the validity of the model with all revelant variables included. (See table 12.) The chi-square statistic computed indicated that the model was indeed valid. Successive iterations were then run to determine which variables should be included in the model with a confidence level of 95%. The final model was as follows:

$$\text{Log odds of acquiring} = b_0 + b_1\text{Previous U.S. experience} + b_2\text{Cash} + b_3\text{Sales}.$$

From this we are able to determine the logistic regression equation which shows the probability of acquiring a U.S. firm:

Probability of acquiring =

$$\frac{1}{1 + \exp\left[-(-1.7962 + 2.1236PUS + .0022Cash + .0002Sales)\right]},$$

where

PUS is the previous U.S. experience of the acquiring firm.

Examining the equation more closely, we can see that the prior experience in the United States weighs very heavily in this model. The interpretation of a catagorical variable, such as previous U.S. experience, is that the exponent of the coefficient gives the odds ratio of acquiring a U.S. firm, after adjusting for the linear effects of cash and sales. Thus in this case, the odds ratio of acquiring, if a foreign firm has previous experience in the United States, is $e^{2.1236} = 8.36$. It accounts for approximately seventy-five percent of the total explanatory power of the model.

TABLE 12

Results from Logistic Regression using Entire Sample

Modelling:

Log odds of acquiring a U.S. firm = cash + sales + leverage + profitability from operations + previous U.S. experience + previous foreign experience.

Number of acquiring firms = 365
Number of non-acquiring firms = 283

Final model:

Log odds of acquiring = -1.7962 + 2.1236 Previous U.S. experience + .0022 Cash + .0002 Sales.

R = .48

Correlations between variables:

Previous U.S. experience and cash = -.009
Previous U.S. experience and sales = -.067
Cash and sales = -.419

Probabilities of predicting correct classification of firm:

Acquiring when actually acquired	91.8%
Non-acquiring when actually non-acquiring	51.94%

c = .836

Cash and sales both are indicators of whether a foreign firm will acquire or not, but do not carry as much weight in terms of explanatory power. The coefficients can be interpreted in much the same manner as for a linear regression. Thus in this case, if there is a one unit change in cash, the log odds ratio will increase by .0022. A unit increase in sales will result in only a .0002 change in the log odds ratio of acquiring a U.S. firm. The coefficient of the intercept term shows that if all other variables in the equation were zero, then the log odds of acquiring a U.S. firm would be 1.7962 or in terms of probability, 16.59%.

The R associated with this model was .48, which indicates that there are other variables that could further explain whether or not a foreign firm would make an acquisition in the United States.

The purpose of this model was to determine the probability of assigning a foreign firm correctly as to whether or not it would acquire a U.S. company. Using the variables that are considered to be significant at the .05 level from the model that was generated above, we can determine these probabilities. The probability of actually predicting that a foreign firm would acquire a U.S. company, when indeed it did is 91.8%. The probability of predicting a foreign firm would not make an American acquisition, when in fact it did not, is 51.94%. If the prediction is made that the firm will acquire a U.S. company, when it did not, the probability of being wrong is 28.87%. Likewise the probability of predicting no acquisition, when one did occur is 16.95%.

Thus we can see that this model is more powerful, in terms of being correct, in being able to choose those firms that will make acquisitions rather than those firms that do not make acquisitions in the United States.

Now it has been established that previous U.S. experience, sales and cash position of the firm are significant in classifying firms, it is of interest to break down the analysis into greater detail.

Country Analysis

Each country was examined on an individual basis to determine if there are distinguishing characteristics for acquiring firms depending on their degree of homogeneity with the United States.

Great Britain has the closest degree of cultural proximity of all countries involved in this study. If the United States is considered to be 0.0, Great Britain has a factor for cultural proximity of 0.1757. The closer this factor is to zero, the closer a country is to the United States in terms of cultural proximity (see table 13). We hypothesized earlier that we would expect there to be more positive synergies from mergers which involved countries that were closer culturally. There are more acquisitions by firms from Great Britain, than any other country in the study and this may partially explain why.

TABLE 13

Factors of Cultural Proximity

Country	Factor
United States	0.0
United Kingdom	0.1757
Canada	0.3081
Switzerland	0.5123
West Germany	0.5963
Netherlands	0.7392
France	1.3239
Japan	1.5953

The results from the logistic regression run solely on firms from Great Britain (see table 14) show that previous experience in the United States plays a heavy role in determining which firms will make an acquisition. The other factor of significance at the 95% level is sales. The overall statistic for the logistic equation is .543, showing that it is possible to explain slightly over half of all acquisitions based on the variables included. The previous U.S. experience has an R of .31, whereas the sales variable has an R of .22, indicating that the previous U.S. experience has more weight than sales in determining whether or not a firm will acquire a U.S. company. The correlation between the two variables is -.005, which indicates that there is essentially no relationship between the two variables.

The probability of classifying an acquiring firm from Great Britain correctly, given that they actually acquired a United States company is 92.7%. The probability of correctly classifying a British company as not acquiring a U.S. firm when it actually did not is 52.3%. Thus, the model is better able to predict which British companies are more likely to acquire U.S. firms, than those that will not make any acquisitions in the United States. The c index, which measures the fraction of concordant pairs plus one half the fraction of tied pairs, assesses the predictive ability of the model. In this case, c was .86, which indicates that the model has good predictive powers.

TABLE 14

Logistic Regression for Great Britain

Modelling:

Log odds of acquiring a U.S. firm = cash + sales + leverage
+ profitability from operations + previous
U.S. experience + previous foreign
experience.

Number of acquiring firms = 150
Number of non-acquiring firms = 107

Final model:

Log odds of acquiring = −2.288 + 2.344 Previous U.S.
experience + .00069 Sales.

R = .543

Correlations between variables:

Previous U.S. experience and cash = −.005

Probabilities of predicting correct classification of firm:

Acquiring when actually acquired	92.7%
Non-acquiring when actually non-acquiring	52.3%

c = .86

Canada has the next closest degree of cultural homogeneity (.3081), and it also has the next highest number of acquisitions in the United States. When examining the logisitic regression associated with Canada (see table 15), we can see that previous U.S. experience again is the most important variable, followed by sales, much as in the case for Great Britain. Cash, however, is also a determining factor at the 95% significance level in helping to classify acquiring and non-acquiring firms. The overall R associated with this equation is .48, indicating that there are other variables, not included, that would be of assistance in helping to classify Canadian firms.

The previous U.S. experience again contributes the most to classification with an R of .26, whereas the R associated with sales was .10 and that with cash .082.

The probability of classifying an acquiring Canadian firm correctly given that it had acquired a U.S. company was 90.3%, and if it had not acquired a U.S. company, when in fact it had not was 55.3%. Therefore, the model is able to identify those firms that will make acquisitions with greater accuracy than for those firms that will not make acquisitions. The c index for predictive ability was .816, which was less than that for Great Britain, but still good.

TABLE 15

Logistic Regression for Canadian Firms

Modelling:

Log odds of acquiring a U.S. firm = cash + sales + leverage + profitability from operations + previous U.S. experience + previous foreign experience.

Number of acquiring firms = 93
Number of non-acquiring firms = 76

Final model:

Log odds of acquiring = −1.739 + 1.796 Previous U.S. experience + .0006 Sales.

$R = .48$

Correlations between variables:

Previous U.S. experience and sales = −.194

Probabilities of predicting correct classification of firm:

Acquiring when actually acquired	90.3%
Non-acquiring when actually non-acquiring	55.3%

$c = .816$

The cultural proximity of Switzerland to the United States is relatively close (.5123), yet they made fewer acquisitions than other countries that lay further away on the proximity scale. This may be reflective of the composition of the Swiss economy, which tends to be dominated by financial concerns, that are not examined in this study. The overall equation for Switzerland showed that no variable could be included in the model with a significance level of 95%.

Although German firms made fewer acquisitions than French firms, Germany is closer in terms of cultural homogeneity (.5963) than France (1.3239). The overall logist equation for Germany (see table 16) also shows that previous U.S. experience is not an important factor in classifying firms. The only factor of significance at the 95% level is sales. Thus it would appear that only the larger German companies are making acquisitions in the United States. The overall R associated with this equation is .589. The R associated with the sales variable is .291, indicating that the intercept term carries more weight than the sales variable. When translating the coefficient of the intercept term into probabilities, we can see that the intercept alone carries a 24.8% probability of correctly classifying an acquiring German firm. The correlation between the intercept term and sales has a relatively high negative association, which would indicate that both terms are not necessary for predictive purposes.

The overall model is not as reliable as the previous two models for Canada and Great Britain in terms of being able to correctly predict those firms that will make acquisitions. This model is able to correctly classify an acquiring German firm with probability 74.1%. Those firms that do not make acquisitions have a probability of being classified correctly of 81.0%. Thus the German model is more able to identify non-acquiring firms than the Canadian or British models, but less likely to identify an acquiring firm correctly. The c index of .907 indicates that the model has a good predictive ability.

TABLE 16

Logistic Regression for German Firms

Modelling:

Log odds of acquiring a U.S. firm = cash + sales + leverage + profitability from operations + previous U.S. experience + previous foreign experience.

Number of acquiring firms = 27
Number of non-acquiring firms = 21

Final model:

Log odds of acquiring = −1.394 + .00043 Sales.

R = .589

Correlations between variables:

Intercept term and sales = −.685

Probabilities of predicting correct classification of firm:

Acquiring when actually acquired	74.1%
Non-acquiring when actually non-acquiring	81.0%

c = .907

The Netherlands possessed the next closest proximity to the United States (.7392) and its firms made fewer acquisitions than those firms from Germany. Like Canada and Great Britain, the most important variable in the model was previous experience in the United States (see table 17). The second variable that contributed to helping classify firms was profitability from operations, measured as earnings before interest and taxes and scaled using total assets. Although the profitability from operations did not contribute as much as the previous U.S. experience (R =.37 versus R =.18), this is the only model where profitability from operations was even a significant factor at the 95% level.

Previous U.S. experience showed some correlation with profitability from operations, with a correlation of .371.

TABLE 17

Logistic Regression for Dutch Firms

Modelling:

Log odds of acquiring a U.S. firm = cash + sales + leverage + profitability from operations + previous U.S. experience + previous foreign experience.

Number of acquiring firms = 23
Number of non-acquiring firms = 20

Final model:

Log odds of acquiring = -4.623 + 4.049 Previous U.S. experience + 22.552 Profitability from operations.

R = .599

Correlations between variables:

Previous U.S. experience and Profitability from operations = .371

Probabilities of predicting correct classification of firm:

Acquiring when actually acquired	91.3%
Non-acquiring when actually non-acquiring	70.0%

c = .891

This model was similar to that for Canada and Great Britain terms of being able to correctly classify acquiring Dutch firms with a probability of 91.3%, but the model was better able to predict those Dutch firms that would not make acquisitions with a probability of 70.0%. The c index in this case was high at .891.

Both countries that could be considered as being distant from the United States in terms of cultural proximity, Japan (1.5953) and France (1.3239), were unable to be modelled. The overall chi-squared for the Japanese model showed that the overall model was not significant at the 95% level for modelling. This indicates that there are other variables that were not included that would better classify acquiring Japanese firms than those variables that were included.

The overall model for the French acquiring firms was significant, but no individual variables were significant at the 95% level for inclusion in the model.

Amount of Acquisition

It is also of interest to know if there are distinctive differences between firms that acquire an entire U.S. company versus those that acquire less than controlling interest. The data was stratified into four different groups: 80% - 100% acquired, 50% - 80% acquired, less than 50% acquired and acquisitions of units of larger corporations. The group of firms that acquired between fifty and eighty percent was eliminated from the analysis, as there were not sufficient firms in the sample to warrant meaningful conclusions.

The majority of firms were in the group that acquired entire U.S. companies. The logistic regression for this group can be seen in Table 18.

TABLE 18

Logistic Regression for Aquisition of Entire U.S. Firm

Modelling:

Log odds of acquiring a U.S. firm = cash + sales + leverage + profitability from operations + previous U.S. experience + previous foreign experience.

Number of acquiring firms = 215
Number of non-acquiring firms = 283

Final model:

Log odds of acquiring = -2.333 + 2.33 Previous U.S. experience + .0002 Sales.

R = .46

Correlations between variables:

Previous U.S. experience and sales = -.086.

Probabilities of predicting correct classification of firm:

Acquiring when actually acquired	91.2%
Non-acquiring when actually non-acquiring	54.1%

c = .843

As with the analyses among countries, both previous experience in the United States and sales were significant variables at the 95% level. The overall R for the logistic equation was .46, indicating that there were other variables that could provide better classification power to the model. The previous U.S. experience once again contributed the most explanatory power with an R of .31, while sales had an R of .13. The correlation coefficient showed that there was no correlation between the two variables.

This model was able to classify firms correctly as to whether or not they would purchase an entire U.S. company with a probability of 91.2%. It was not as accurate in correctly classifying those firms that would acquire less than 100%. The probability of correctly classifying a firm that would not acquire an entire company was 54.1%.

The results of the analysis for firms that acquire less than fifty percent of an American company (see table 19) show that cash is significant at the 95% level, as is previous U.S. experience. This differs from those companies that purchase the entire company, in that cash and not sales is important. Firms that purchase less than fifty percent may be making an investment by acquiring a large portion of a company, as opposed to attempting to align themselves strategically in the U.S. marketplace through acquisition of an entire firm. A firm seeking investment opportunities for excess cash balances may well turn to the United States and purchase large holdings of U.S. companies, regardless of the size of the acquiring firm. Those firms seeking strategic realignment or new markets for expansion purposes will be larger, and hence, the sales of the firm will be more important.

TABLE 19

Logistic Regression for Firms Acquiring less than Fifty Percent

Modelling:

Log odds of acquiring a U.S. firm = cash + sales + leverage + profitability from operations + previous U.S. experience + previous foreign experience.

Number of acquiring firms = 55
Number of non-acquiring firms = 283

Final model:

Log odds of acquiring = -3.552 + 1.999 Previous U.S. experience + .0047 Cash.

R = .46

Correlations between variables:

Previous U.S. experience and cash = .052

Probabilities of predicting correct classification of firm:

Acquiring when actually acquired	21.8%
Non-acquiring when actually non-acquiring	98.6%

c = .810

The model is better able to classify those firms that will not make an acquisition of less than 50% with a probability of 98.6%. It is not very accurate when attempting to classify those firms that will make an acquisition of less than fifty percent; it does this correctly with a probability of 21.8%.

The stratification by acquisition of units displays the same characteristics as the group that acquires less than fifty percent of a company (see table 20). Both previous U.S. experience and cash are significant factors, but weighted differently. For firms that purchase less than fifty percent both variables are weighted equally in their contribution to classifying firms correctly. The logistic equation for firms that acquire only units of U.S. companies, shows that previous U.S. experience contributes more classification than does cash.

TABLE 20

Logistic Regression for Acquisition of Units

Modelling:

Log odds of acquiring a U.S. firm = cash + sales + leverage + profitability from operations + previous U.S. experience + previous foreign experience.

Number of acquiring firms = 66
Number of non-acquiring firms = 283

Final model:

Log odds of acquiring = −3.38 + 2.190 Previous U.S. experience + .0033 Cash.

$R = .438$

Correlations between variables:

Previous U.S. experience and cash = −.031

Probabilities of predicting correct classification of firm:

Acquiring when actually acquired	19.7%
Non-acquiring when actually non-acquiring	98.6%

$c = .802$

Once again, the model is better able to predict which firms will not purchase units with a probability of 98.6%;

it is able to correctly classify those firms that will make an acquisition with a probability of only 21.8%.

Yearly Analysis

Economic conditions changed during the period under study, and it is of interest to examine whether the overall economy during these distinctive time periods resulted in any distinctive firm characteristics of acquiring firms. The time periods were divided into July 1981 to December 1982, January 1983 to December 1983, and January 1984 to June 1986. The first period was bordering on recessive conditions in the United States. The second time period was a year in which very few acquisitions occurred, either domestically or internationally. The final time period was one in which economic conditions had improved considerably, and merger activity had increased.

The overall results from all three time periods were very similar (see Tables 21, 22 and 23). Previous U.S. experience and cash were both significant factors for all time periods, with previous U.S. experience carrying more weight in contributing to the explanatory power of the equation. The major difference between the three periods is in the predictive ability of the model to classify firms correctly. During the last time period, the model was better able to classify those firms that would acquire a U.S. company with a probability of 90.4%, than the model for the time period 1981-1982, where the model could classify correctly an acquiring firm correctly with a probability of only 28.8%.

TABLE 21

Logistic Regression for Years 1981-1982

Modelling:

Log odds of acquiring a U.S. firm = cash + sales + leverage + profitability from operations + previous U.S. experience + previous foreign experience.

Number of acquiring firms = 125
Number of non-acquiring firms = 245

Final model:

Log odds of acquiring = -2.328 + 1.861 Previous U.S. experience + .0038 Cash.

R = .431

Correlations between variables:

Previous U.S. experience and cash = -.044

Probabilities of predicting correct classification of firm:

Acquiring when actually acquired	28.8%
Non-acquiring when actually non-acquiring	93.1%

c = .798

The model during the first time period was better able classify those firms that would not make an acquisition with a probability of 93.1%, whereas the model for the final time period could classify non-acquiring correctly with a probability of 56.7%.

The predictive ability for firms acquiring during 1983 was very poor, with a probability of correctly assigning a firm as an acquiring firm of only 9.3%. However, the model was able to correctly identify non-acquiring firms with a probability of 99.2%.

TABLE 22

Logistic Regression for 1983

Modelling:

Log odds of acquiring a U.S. firm = cash + sales + leverage + profitability from operations + previous U.S. experience + previous foreign experience.

Number of acquiring firms = 43
Number of non-acquiring firms = 245

Final model:

Log odds of acquiring = -4.962 + 3.698 Previous U.S. experience + .0027 Cash.

R = .452

Correlations between variables:

Previous U.S. experience and cash = -.036

Probabilities of predicting correct classification of firm:

Acquiring when actually acquired	9.3%
Non-acquiring when actually non-acquiring	99.2%

c = .802

These results tend to indicate that there are factors outside the firm that are of greater importance in determining whether a firm will make an acquisition in the United States.

TABLE 23

Logistic Regression for Years 1984-1986

Modelling:

Log odds of acquiring a U.S. firm = cash + sales + leverage + profitability from operations + previous U.S. experience + previous foreign experience.

Number of acquiring firms = 197
Number of non-acquiring firms = 245

Final model:

Log odds of acquiring = −2.228 + 2.226 Previous U.S. experience + .0039 Cash.

R = .476

Correlations between variables:

Previous U.S. experience and cash = −.097

Probabilities of predicting correct classification of firm:

Acquiring when actually acquired	90.4%
Non-acquiring when actually non-acquiring	56.7%

c = .821

CHAPTER VI
SUMMARY

Conclusions

The principal components analysis indicates the primary environmental factors that should taken into consideration by a foreign acquiring firm are the homogeneity of the cultures, the relative tax differences, and the differential real rates of interest between the two countries. These results suggest that foreign firms that make acquisitions in the United States are interested in tax savings, which may be substantial depending on the country of origin. Seeking lower real rates of interest would indicate that foreign firms may view an American acquisition as providing them with access to larger capital markets at a lower cost than would be available in their own country. If a company was highly capital intensive this would lower one of their factors of production, thus reducing their overall production costs. The cultural proximity factor may provide some indication of the ease with which management integration can be acheived and hence how soon the new organizational structure can be operating efficiently.

Of equal importance is the environment for production possibilities. Foreign acquiring firms examine how the industrial sector is performing in the United States as one of their decision criterion. This would include the level of industrial production, as well as the level of employment. The degree of correlation between actual and predicted exchange rates is also a consideration. This last factor indicates that foreign firms seek less uncertainty in exchange rate predictability, as opposed to seeking purchasing power disequilibrium.

Of lesser interest is the correlation between country business trends. Thus it is a combination of industry factors and general environmental characteristics that are of concern to acquiring foreign firms.

The overall logistic model, which covered a five year time period and seven different countries, indicated that three primary firm-specific characteristics could be identified for foreign firms that acquire U.S. companies. These factors include previous experience in the United States, the level of cash the acquiring firm possesses, and the level of sales.

Other analysis of the data revealed that the vast majority of acquiring firms had previous operating experience in the United States, primarily in their own industry. This suggests that most foreign firms are not acquiring U.S. companies purely for diversification purposes, either based on product or geography; that instead these firms are seeking an expansion of their market. This can be deduced form the fact that firms with larger sales are making acquisitions or that firms have excess cash and are acquiring U.S. companies to obtain a better return than they could realize in their home country.

This latter reason can be substantiated by noting that the significant variables for those firms acquiring less than fifty percent are cash and previous U.S. experience. Firms that acquire an entire U.S. company by contrast show that the sales level of the acquiring firm as well as its previous U.S. experience are important, which would indicate that these firms are attempting to expand sales further through geographic market expansion.

By breaking down the analysis into years with different economic environments, we see that the model is better able to predict which firms will acquire when economic conditions are more stable. However, when there is greater uncertainty in the economic environment, the model is better able to distinguish those firms that will not acquire U.S. companies.

On a individual country basis, the model could not be tested for Japan and France. Both of these countries are far removed culturally from the United States, so other as yet unidentified factors may be relevant in these cases. The French firms tended to be government owned or subsidized, that bought primarily in the service sectors. Japanese firms bought primarily in the manufacturing and business services sectors, as did many of the British and German firms. The Japanese choices may be viewed as defensive acquisition strategies, as these are sectors of the American economy where political stances are often made with regard to protectionistic measures, with the Japanese frequently being the target. Furthermore, it may be difficult to model the acquiring Japanese firms as they are subject to a restricted domestic merger market. Thus any Japanese firm wishing to make an acquisition would be forced to search overseas for a suitable target, whereas firms from other countries are able to find acquisitions in their home country first before seeking overseas targets.

The Swiss model also showed no significant variables, but unlike Japan and France that are far removed culturally from the United States, Switzerland is relatively close on the scale. This suggests that there may not have been sufficient firms to model, as the primary Swiss business sectors are financially oriented.

The model for the British acquiring firms reveals previous U.S. experience and cash as identifying factors of acquiring firms. This suggests that there are more British firms making acquisitions of less than fifty percent as a ratio of all British firms acquiring compared to other countries. Furthermore, it may be the case that these firms have defined acquisition programs in the United States (such as Hanson Trust) and are aware of the need for cash in order to make purchases, and hence keep higher cash balances.

Canadian firms on the other hand show that sales and previous U.S. experience are important in being able to classify acquiring Canadian firms correctly. As many of the Canadian firms are in the natural resources industry, these firms will not expand unless their need for more reserves increase, which would be a function of meeting market demand, due to increased sales.

The only country model that did not include previous U.S. experience as a significant factor was that for Germany. Only the sales level of the acquiring firm was an identifying characteristic. This relates to the fact that German firms were the only ones that made acquisitions in the same industry without prior experience in the United States. The majority of German acquisitions were in manufacturing industries, and by firms that were already in those industries. This suggests that German firms make acquisitions in the United States primarily for market expansion purposes.

Previous U.S. experience played a role once again for Dutch acquiring firms, but the other significant factor was profitability from operations, which was not significant in any other circumstance.

Thus, in being able to predict which foreign firms are likely acquirers of U.S. companies, in general the previous U.S. operating experience of the company should definitely be taken into account, as should the sales and cash position of the firm. Furthermore, this model is better at predicting during more certain economic conditions, but is able to identify those firms that will not acquire during times of economic uncertainty.

Further Research

Having studied the characteristics of the acquiring firm in depth, it would be of interest to know if these are different from the characteristics of domestic firms that make acquisitions. Also do the acquired firms display different characteristics, both those acquired by foreign firms and those acquired by domestic firms? Are there distinguishing characteristics to the firms chosen by foreign companies for acquisition? As many acquired firms are smaller and closely held, this data may be more difficult to locate, but should provide some interesting conclusions.

Of interest in any merger study is the distribution of gains, both to the acquiring and the acquired firm. Earlier studies have attempted to determine the gain to the acquiring firm through inferences and it would be of more interest to examine the gains to both the acquiring and acquired firms directly from the data.

Previously these analyses were difficult to undertake in the international arena due to inadequate data. Now the data is more readily available on the foreign firms to conduct such a study, but closer examination of the data reveals another, potentially more difficult problem from an empirical standpoint. Many of U.S. firms that have been acquired recently are subsidiaries, units or divisions of larger U.S. companies. If an event study is run using the listed U.S. acquired firm and not the actual division that was in fact purchased, one is in essence examining the effects of divesture to a foreign firm. This would be worthwhile undertaking and comparing the results to divestitures that are made to U.S. firms. Is there in fact a difference?

There are many avenues for further research in this area, and now the data is more widely available, this should prove to be a fruitful and interesting area for research.

APPENDIX A

OTHER FOREIGN COUNTRIES MAKING ACQUISITIONS IN THE UNITED STATES DURING JULY 1981 AND JUNE 1986

Country	Number of Acquisitions
Australia	33
Bahamas	3
Bahrain	1
Belgium	6
Bermuda	11
British Virgin Islands	1
Denmark	3
Finland	10
Grand Cayman Islands	2
Hong Kong	13
Ireland	9
Israel	4
Italy	7
Kuwait	4
Liechtenstein	1
Luxembourg	3
Monaco	1
Netherlands Antilles	6
New Zealand	1
Norway	3
Panama	4
South Africa	4
Spain	1
Sweden	25
Taiwan	2
Private Investors (various origins)	8

APPENDIX B

SIC INDUSTRY CLASSIFICATION CODES

01-09	Agriculture
10	Metal Mining
11-12	Coal Mining
13	Oil and Gas Extraction
14	Non-metallic minerals mining
15-17	Construction
20	Food and Kindred Products
22	Textile Mill Products
23	Apparel and other finished fabric products
24	Lumber and Wood Products
25	Furniture and Fixtures
26	Paper and allied products
27	Printing, publishing
28	Chemicals and allied products
29	Petroleum Refining
30	Rubber and plastic products
32	Stone, clay, glass and concrete products
33	Primary metal industries
34	Fabricated metal products
35	Machinery, except electrical
36	Electrical and electronic machinery, equipment
37	Transportation equipment
38	Measuring instruments, photographic, medical & optical
39	Manufacturing - misc.
42	Motor freight transportation
44	Water Transportation
45	Air Transportation
47	Tranportation Services
48	Communications
49	Electric, gas and sanitary services
50-51	Distribution and wholesale trade
54	Food stores
55	Automotive dealers and gasoline service stations
58	Eating and Drinking places
70	Hotels and lodging places
72	Personal Services
73	Business services
737	Computer and Data Processing Services
75	Automotive Services
78	Motion Pictures
79	Amusement and Recreation
80	Health services
82	Educational Services

83	Social services
85	Science, research and development
89	Engineering and other services
99	Nonclassifiable

BIBLIOGRAPHY

Afifi, A.A., and Virginia Clark. Computer-Aided Multivariate Analysis. Belmont, CA: Wadsworth, Inc., 1984.

Brealey, Richard and Stewart Myers. Principles of Corporate Finance. New York: McGraw-Hill, Inc., 1981.

"Buying Abroad: Where the Money Is," Mergers and Acquisitions, vol. 18 (Winter 1984), pp. 57-63.

Caves, R.E. Multinational Enterprise and Economic Analysis New York: Cambridge University Press, 1982.

Cooke, Terence E. Mergers and Acquisitions. New York: Basil Blackwell, Inc., 1986.

Copeland, Thomas E., and J. Fred Weston. Financial Theory and Corporate Policy, 2nd ed. Reading, MA: Addison-Wesley Publishing Co., 1983.

Corporate Taxes--A Worldwide Summary,Price Waterhouse, Inc.: New York, 1982-1986.

Daniels, John D., Ernest W. Ogram, Jr. and Lee H. Radebaugh. International Business: Environment and Operations. Reading, MA: Addison-Wesley Publishing Co., 1983.

Grubel, Herbert G. "Internationally Diversified Portfolios: Welfare Gains and Capital Flows," American Economic Review, vol. 58 (December 1968), pp. 1299-1314.

Guide to Foreign Investment under United States Law. Committee to Study Foreign Investment in the United States of the Section of Corporation, Banking, and Business Law of the American Bar Association. New York: Harcourt, Brace, Javanovich, 1979.

Halperin, M., W.C. Blackwelder, and J.I. Verter. "Estimation of the Multivariate Logistic Function: A Comparison of the Discriminant Function and Maximum Likelihood Approach," Journal of Chronic Diseases, vol. 24 (1971), pp. 125-158.

Hisey, Karen B., and Richard E. Caves. "Diversification Strategy and Choice of Country: Diversifying Acquisitions Abroad by U.S. Multinationals, 1978-1980," Journal of International Business Studies, vol. 16 (Summer 1985), pp. 51-64.

Hofstede, Geerte. Culture's Consequences: International Differences in Work-Related Values. Beverly Hills, CA: Sage Publications, 1980.

International Monetary Fund Statistics. Washington DC: International Monetary Fund.

Jacquillat, Bertrand, and Bruno Solnik. "Multinationals are Poor Tools for Diversification," Journal of Portfolio Management, vol. 5 (Winter 1978), pp. 8-12.

Kindelberger, Charles P. American Business Abroad: Six Lectures on Direct Investment. New Haven: Yale University Press, 1969. Ch. 1, pp. 1-36.

Kitching, G. "Why Do Mergers Miscarry?", Harvard Business Review, vol. 45 (November-December 1967), pp. 84-101.

Lachenbruch, P.A. Discriminant Analysis. New York: Hafner Press, 1975.

Lee, Cheng F. Financial Analysis and Planning: Theory and Application. Reading, MA: Addison-Wesley Publishing Co., 1985.

Lessard, Donald R. "World, Country, and Industry Relationships in Equity Returns," Financial Analysts Journal, vol. 32 (January/February 1976), pp. 32-38.

Lessard, Donald R. "Finance and Global Competition: Exploiting Financial Scope and Coping with Volatile Exchange Rates," (January 1986), Research Paper #863.

Lewellen, Wilbur G. "A Pure Financial Rationale for the Conglomerate Merger," Journal of Finance, vol. 26 (May 1971), pp. 521-537.

Levy, Haim, and Marshall Sarnat. "International Diversification of Investment Portfolios," American Economic Review, vol. 60 (September 1970), pp. 668-675.

Levy, Haim, and Marshall Sarnat. Portfolio and Investment Selection: Theory and Practice. Englewood Cliffs, NJ: Prentice-Hall International, Inc., 1984.

Logue, Dennis E. "Some Thoughts on Corporate Investment Strategy and Pure Strategic Investments," in Frans G.J. Derkinderen, and Roy L. Crum, editors, Readings in Strategy for Corporate Investment, Marshfield, MA: Pitman Publishing, Inc., 1981.

Mandelker, Gershon. "Risk and Return: The Case of Merging Firms," Journal of Financial Economics, vol. 1 (December 1974), pp. 303-335.

Marans, Eugene J., Peter C. Williams, Joseph P. Griffin, and Joseph E. Pattison, eds., Manual of Foreign Investment in the United States. New York: McGraw-Hill, Inc., 1984.

Mergers and Acquisitions: The Journal of Corporate Venture. Washington, DC: Mergers and Acquisitions, Inc., 1981-1986.

Montgomery, Cynthia A., and Harbir Singh. "Diversification Strategy and Systematic Risk," Strategic Management Journal, vol. 5 (1984), pp. 181-191.

Moody's Industrial Manual. New York: Moody's Investor Service, Inc., 1981-1986.

Moody's International Manual. New York: Moody's Investor Service, Inc., 1981-1986.

Naumann-Etienne, Ruediger. "A Framework for Financial Decisions in Multinational Corporations--Summary of Recent Research," Journal of Financial and Quantative Analysis, vol. 9 (November 1974), pp. 859-873.

Officer, Lawrence H., "The Purchasing-Power-Parity Theory of Exchange Rates: A Review Article," IMF Staff Papers, vol. 52 (March 1976), pp. 1-60.

Predicasts Basebook. Cleveland, OH: Predicasts, Inc., 1981-1986.

Press, S.J., and Wilson, S. "Choosing between Logistic Regression and Discriminant Analysis," Journal of the American Statistical Society, vol. 73 (1978), pp. 699-705.

Ragazzi, Giogio. "Theories of the Determinants of Direct Foreign Investment," IMF Staff Papers, vol. 20 (July 1973), pp. 471-498.

Rappaport, Alfred. "Financial Analysis for Mergers and Acquisitions," Mergers and Acquisitions vol.11 (Winter 1976), pp. 18-36.

"Roundtable: The International Acquisitions Market," Mergers and Acquisitions vol. 19 (Spring 1984), pp. 26-39.

Rugman, Alan M. International Diversification and the Multinational Enterprise. Lexington, MA: Lexington Books, 1979.

Rumelt, R. P. Strategy, Structure, and Economic Performance. Boston: Division of Research, Harvard Business School, 1974.

Salter, M.S. and W.A. Weinhold. Diversification through Acquisition. Lexington, MA: Lexington Books, 1979.

Schall, Lawrence D. "Asset Valuation, Firm Investment, and Firm Diversification," Journal of Business, vol. 45 (January 1972), pp. 11-28.

Senbet, Lemma W., and Robert A. Taggart, Jr. "Capital Structure Equilibrium under Market Imperfections and Incompleteness," Journal of Finance, vol. 39 (March 1984), pp.93-103.

Solnik, Bruno H. "Why Not Diversify Internationally Rather than Domestically?" Financial Analysts Journal, vol. 30 (July/August 1974), pp. 48-54.

Stobaugh, Robert., Jr. "How to Analyze Foreign Investment Climates," Harvard Business Review, vol. 47 (September-October 1969), pp. 100-108.

Wall Street Journal. New York: Dow Jones and Company, 1981-1986.

Wansley, J., W. Lane, and H. Yang. "Shareholder Returns to U.S. Acquired Firms in Foreign and Domestic Acquisitions," Journal of Business Finance and Accounting, vol. 10 (Winter 1983), pp. 647-656.

BIOGRAPHICAL SKETCH

Deborah Lynne Wright, daughter of Robert and Nancy Wright, was born in Belgium. She earned a Bachelor of Science in management from Tulane University in 1978, a Master of Business Administration from the University of Denver in 1982, and a Doctor of Philosophy degree from the University of Florida in 1987.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Roy Crum

Roy Crum, Chairman
Professor of Finance, Insurance,
and Real Estate

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

H. Levy

Haim Levy, Co-Chairman
Walter J. Matherly Professor of
Finance

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Roger Huang

Roger Huang
Associate Professor of Finance,
Insurance, and Real Estate

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Leonard Cheng

Leonard Cheng
Associate Professor of Economics

This dissertation was submitted to the Graduate Faculty of the department of Finance, Insurance, and Real Estate in the College of Business Administration and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December 1987

Madelyn Lockhart

Dean, Graduate School